A community-based approach to target depression and to prevent suicidal behavior

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European Alliance against Depression

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Frequency of suicidal acts and suicides
7241 suicidal acts, completed suicides (9.4%); (Mergl et al 2015, PlosOne)

Data from OSPI-intervention and control regions (two or three years per country between 2008 and 2011)
Frequency of suicidal acts and suicides

7241 suicidal acts, completed suicides (9.4%); (Mergl et al 2015, PlosOne)

Suicidal Acts - Men
Suicidal Acts - Women
Completed Suicides - Men
Completed Suicides - Women
Poisoning (drugs)
Sharp Objects
Hanging
Jumping
Other Means

Data from OSPI-intervention and control regions (two or three years per country between 2008 and 2011)
Causal links between psychosocial factors, depression and suicidal behaviour?

Psychosocial factors e.g. stress, unemployment, somatic disorders

Depression
Addiction, Schizophrenia, Alcohol abuse, et al

Suicidal behaviour
Causal links between psychosocial factors, depression and suicidal behaviour?

Psychosocial factors e.g. stress, unemployment, somatic disorders → Depression

Addiction, Schizophrenia, Alcohol abuse, et al → Suicidal behaviour

There is a tendency to overestimate the causal relevance of external factors
Depression and suicidal behaviour

Up to 15% suffering from severe recurrent depression commit suicide (Angst et al. 1999)

20 - 60% have attempted suicide (Jamison 1990; Malone et al. 1995)

47 – 69% have suicidal thoughts (Asnis et al. 1993; Bronisch & Wittchen 1994; Zisook et al. 1994; Sokero et al. 2003)

42% of suicide victims were former psychiatric in-patients (Andersen et al. 2001)

90% of suicide victims have been suffering from a mental disorder (depression: 30 – 87%) (Lönnqvist 2000)

44% of the worldwide almost one million suicides per year occur in the context of mood disorders (Bertolote et al., 2004)
Suicide risk and somatic disorders
(Webs et al. 2012, Arch Gen Psychiatry)

• General Practice Research Database; 593 GPs, patient records from about 8% of the UK population
• 2001 – 2008
• Comparison of 873 suicide cases with 17,460 controls
• List of somatic disorders (stroke, cancer, asthma, CVD, diabetes mellitus, hypertonus, COPD, epilepsy, chronic lower back pain, osteoporosis, osteoarthritis)

• Presence of one of these disorders
  – in suicide victims: 38.7%  
  – in controls: 37%

E.g. cancer: 3.4% of suicide victims, 3.2% of controls
Suicides and unemployment before and after the reunification in the eastern part of Germany

- **Number of suicides per year**
- **Unemployment rate %**

- **Suicide**
- **Unemployment**
Antidepressant utilisation and suicide in Europe: An ecological study involving 29 countries

Gusmao et al. 2013, PLoS ONE 8: e66455

### Table 5. Model estimates of fixed-effects with SDR suicide rate as outcome.

<table>
<thead>
<tr>
<th>Regression coefficient</th>
<th>SE</th>
<th>T</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDD/1000/day</td>
<td>-.088</td>
<td>.026</td>
<td>-3.327</td>
</tr>
<tr>
<td>GDP</td>
<td>.018</td>
<td>.026</td>
<td>.707</td>
</tr>
<tr>
<td>Alcohol</td>
<td>.129</td>
<td>.159</td>
<td>.809</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-.015</td>
<td>.064</td>
<td>-.232</td>
</tr>
<tr>
<td>Divorce</td>
<td>1.273</td>
<td>.473</td>
<td>2.692</td>
</tr>
</tbody>
</table>

doi:10.1371/journal.pone.0066455.t005
Annual suicide rates for males and females aged 10 to 19 years in the US (Bridge et al 2008, JAMA)

Estimated excess youth suicide deaths in 2004 and 2005: 326 + 292
Changes in age standardized suicide rates (%) between 2000 and 2012

Data Source: WHO, 2013
(Preventing Suicide, A global imperative)
Depression
diagnostic and therapeutic deficits in developed countries

- Patients with depression in the population attended by PCPs: 100 pat.
- Depression diagnosed: 60-70
- Treated according to guidelines: 30-35
- Still compliant after 3 months of treatment: 10-15
- < 10

The 4-level intervention concept of EAAD: the local network

The community-based network

- General Practitioners and other primary care providers
- Psychiatric Hospitals and specialised care providers
- Medical and mental health associations
- Psychotherapists
- Pharmacies
- Geriatric care
- Self-help groups
- Crisis intervention centres
- Others
- Local health authorities and stakeholders
- Patient and relatives organisations
- Police
- Churches and social services
- Schools
- Health insurance funds
European Alliance against Depression (EAAD): The 4-level intervention concept

Goal:
Improved care for patients suffering from depression and preventing suicidal behaviour

Primary care and mental health care
General public: Depression awareness campaign
Patients, high-risk groups and relatives
Community facilitators and stakeholders

www.eaad.net
EAAD materials, poster campaign

Finland

Germany

Hungary

Italy

Slovenia

Depression can affect everybody

Depression has many faces

Depression can be treated

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Model project: „Nuremberg Alliance against Depression“

Main outcome: number of suicidal acts in comparison to the baseline year and a control-region

Number of suicides

Number of suicide attempts

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Model project „Nuremberg Alliance against Depression“

Chi² (one-tailed):
2000 versus 2001; p< 0.05
2000 versus 2002; p< 0.01
2000 versus 2003; p< 0.01

Hegerl et al. 2006, 2010

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German Alliance against Depression
www.buendnis-depression.de

Currently over 80 regions in Germany have started a regional alliance against depression
European Alliance Against Depression (EAAD)

Non-profit association since 2008

Aims:
- to promote the implementation of regional alliances against depression
- better care for depressed patients & to prevent suicidal behaviour
- 4-level intervention approach
- implementation in more than 100 regions from 21 countries
- best practice example according to the WHO Suicide Report and the Green Paper of the European Commission


Project meeting Colares, Portugal, 2013
EAAD Members to date (2017)

Albania:
Community Centre for Health and Wellbeing

Australia:
New South Wales:
Black Dog Institute
Western Australia:
WA Primary Health Alliance

Austria:
pro mente tirol
Prof. Dr. Ullrich Meise,
Mag. Angela Ibelshäuser
Sylvia Lohmeyer

Belgium:
LUCAS Katholieke Universiteit Leuven
Prof. Dr. Chantal van Audenhove

Belarus:
Vitebsk State Medical University
Prof. Andrei Kirpichenka

Bulgaria
Institute for Population and Human Studies,
Bulgarian Academy of Sciences
Dr. Anna Alexandrova-Karamanova

Canada:
Mental Health Commission of Canada
Mr. Edward Mantler

Chile:
Universidad Austral de Chile Facultad
Medicina, Instituto Neurociencias Clinicas
Dr. Thomas Baader

Estonia:
Est-Sw MH and Suicidology Institute (ERSI)
Prof. Dr. Airi Värnik

France:
URC ECO
Karine Chevreul
www.urc-eco.fr

Germany:
German Depression Foundation (Stiftung Deutsche Depressionshilfe)
Prof. Dr. Ulrich Hegerl

Greece:
EPAPSY- Association for Regional Development and Mental Health
Prof. Stelios Stylianidis, Panagiotis Chondros

Hungary:
Végeken Egészséglélektani Alapítvány
András Székely

Ireland:
National Suicide Research Foundation
Dr. Ella Arensman

Italy:
South Tyrol:
EOS Genossenschaft
Rome:
Sapienza University of Rome, Department of Neurosciences
Suicide Prevention Center, Sant’Andrea Hospital
Prof. Maurizio Pompili

Kosovo:
QENDRA E SHËNDETIT MENDOR NË PRIZREN
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Institute of Psychiatry and Neurology Third Department of Psychiatry
Prof. Dr. Adam Wichniak

Portugal:
EUTIMIA
Prof. Ricardo Gusmão

Slovenia:
Slovene Centre for Suicide Research, Institut Andrej Marusic, Univerza na Primorskem
Vita Postuva

Spain:
Parc de Salut Mar Barcelona, Institut de Neuropsiquiatria i Addicions
CIBERSAM
Dr. Victor Pérez Sola

Turkey:
Uludag University, Bursa
Dr. Hayriye Gulec

Italy:
DE LEO FUND ONLUS
Prof. Diego De Leo

United Kingdom:
NMAHP Research Unit, University of Stirling
Prof. Margaret Maxwell
Suicide rates in Regensburg before and after the "Regensburg Alliance against Depression"

(HÜBNER-LIEBERMANN et al 2010: Gen Hosp Psychiatry 32: 514-518)
Szolnok Alliance against Depression: suicide rates compared to the whole country (p=.017) as well as a control region (p=.0015) (Szekely et al 2014, PLoS ONE)
partners implementing interventions

<table>
<thead>
<tr>
<th>Country</th>
<th>Intervention Region (Population)</th>
<th>Control Region (Population)</th>
</tr>
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<tbody>
<tr>
<td>Germany</td>
<td>Leipzig (507,000)</td>
<td>Magdeburg (230,000)</td>
</tr>
<tr>
<td>Hungary</td>
<td>Miskolc (171,000)</td>
<td>Szeged (167,000)</td>
</tr>
<tr>
<td>Ireland</td>
<td>Limerick (83,863)</td>
<td>Galway (183,863)</td>
</tr>
<tr>
<td>Portugal</td>
<td>Amadora (200,000)</td>
<td>Almada (150,000)</td>
</tr>
</tbody>
</table>
OSPI-Europe: Main outcomes on suicidal behaviour

**Germany**

\[ \chi^2 = 1.12; \quad p = 0.14 \text{ (one-tailed)} \]

**Hungary**

\[ \chi^2 = 0.33; \quad p = 0.28 \text{ (one-tailed)} \]

**Portugal**

\[ \chi^2 = 4.82; \quad p = 0.01 \text{ (one-tailed)} \]

**Ireland**

\[ \chi^2 = 2.55; \quad p = 0.06 \text{ (one-tailed)} \]

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Ireland: process evaluation

• in 2009 and 2010, Limerick (intervention region) became the biggest unemployment ‘blackspot’ in Ireland because the biggest employing company closed down:
  → Loss of medical card and discontinuation of treatment for depression

• close to 80% of all police officers (Leipzig: 9,7%, Miscolc: 2,5%) and close to 100 % of GPs were trained:
  → Higher recognition rate of suicidal behaviour?
Railway suicide of national soccer goal keeper, 10. Nov. 2009
Railway suicide of Robert Enke (national goal keeper)

Railway suicides per month
(1999-2011, total number 8921)

Robert Enke's suicide (10th November 2009)

Obsequies for Robert Enke
(15th November 2009)
Railway suicides:
2-year period before and after the suicide of R. Enke
(Hegerl et al 2013, J Affect Dis)

Suicide of Robert Enke
(10.11.2009)

Obsequies for Robert Enke
(15.11.2009)

2-year period before Enke's suicide
(Ø2,3 Suicides per day)
09.11.-20.11.2009

2-year period after Enke's suicide
(Ø2,73 Suicides per day)
Depression is a sign of personal weakness (% agree)

Before | After
--- | ---
Germany | IR | CR |
Hungary | IR | 47.8 | 43.6 |
| | IR | 30.1 | 11.9 |
| | CR | 21.6 | * |
| | CR | 9.0 | * |
Ireland | IR | 18.0 |
| | CR | 10.8 |
| | CR | 19.2 |
| | CR | 11.6 |
Portugal | IR | 31.9 |
| | IR | 31.0 |

* Indicates a significant change before and after.
“There is something admirable in not seeking help”

(% agree)

Before  | After
---      | ---
IR Germany | 35.5 | 84.5
CR Hungary | 34.6 | 77.4
IR Ireland | 53.6 | 88.6
IR Portugal | 57.6 | 84.2
IR Portugal | 60.0 | 60.6

IR = Ireland

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Combine the targets depression and suicidal behaviour

- two large and overlapping mental health problems
- broader acceptance and support (about 30% of the population is affected by depression directly or via a close relative)
- anti-suicide campaigns are risky
- focus on depression when addressing the general population, but on suicidal behaviour when addressing health professionals, gatekeepers and high risk groups
Become simultaneously active at the four levels:
creates synergistic and catalytic effects
Involvement of pharmaceutical industry?
Balance between bottom-up and top-down in implementation and dissemination strategy (feeling of ownership)
Large pool of EAAD intervention materials (in 10 languages)

Professional PR-concept with
- Poster and placards
- Leaflets and booklets
- Cinema and TV spots
- Flyers
- Videos, CD-ROMs, etc.

Educational packages
- for media (media guide)
- for PCPs: detailed 5-hour and 3-day training programs
- for patients/relatives: e.g. information materials, videotapes
- for community facilitators (teacher, priests, defence forces, policemen, social workers, geriatric caregivers, pharmacists)

Train-the-trainer workshop packages

Support of self help activities
- iFightDepression-tool
- Brochures, videos, CD-ROM
- Emergency card
- Discussion forum (internet)
- Sleep regulation APP
iFightDepression
Online Self-management tool

E-learning tool for health professionals has been developed
• iFightDepression self-management tool and website available for broad use
  – Tool:
    • Guided, internet-based, free to use
    • 2 versions (adults 25+, young people 15-24)
    • 6 core workshops, mood monitoring, worksheets, help contacts
    • 8 languages: English, German, Spanish, Catalan, Hungarian, Estonian, Bulgarian, Dutch, Italian
  – Website: 13 countries, 12 languages
    • English, German (German and Austrian), Spanish, Catalan, Hungarian, Estonian, Bulgarian, Portuguese, French, Basque, Dutch, Italian

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Implementation steps

Step 1: Planning, design, strategy

- Status Quo Analysis; Definition of purpose
- Recruiting allies
- Analysis of resources
- Definition of basic structure
- Appointment of coordinator

Initiators in a clearly defined region

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Step 2: Preparation

Contacting media
preparation of opening event
Planning and locating first public events
Scheduling of first 10 workshops
Training of lecturers
Recruiting of lecturers
Involvement of patrons
Integration of all relevant institutions
Adaptation and production of info material

Step 1: Planning, design, strategy

Status Quo Analysis; Definition of purpose
Recruiting allies
Analysis of resources
Definition of basic structure
Appointment of coordinator
Initiators in a clearly defined region

Preparing the evaluation, baseline measurement

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**Step 1: Planning, design, strategy**

- Status Quo Analysis; Definition of purpose
- Appointing coordinator
- Analysis of resources
- Definition of basic structure
- Recruiting allies
- Initiators in a clearly defined region

**Step 2: Preparation**

- Continuous evaluation
- Initiating exchange with local institutions
- Recruiting allies
- Analysis of resources
- Definition of basic structure
- Appointment of coordinator
- Opening event
- Preparing the evaluation, baseline measurement
- Involvement of patrons
- Integration of all relevant institutions
- Adaptation and production of info material
- Recruiting lecturers
- Training of lecturers
- Planning and locating first public events
- Scheduling of first 10 workshops
- Contacting media for preparation of opening event
- Recruiting media
- Preparation of opening event

**Step 3: Implementation**

- Advanced training for GPs
- Workshops for multipliers
- Lectures / public events
- Distribution of info material
- Self help activities
- Implementation of media guide
- Intensified exchange between local institutions
- Hotline for patients after a suicide attempt
- Cooperation with the media/press
- Initiators in a clearly defined region

Initiators in a clearly defined region

**Opening event**

Advanced training for GPs
Lessons learnt:

- 4-level intervention concept: evidence for preventive effects on suicidal behaviour from regions in Germany, Hungary and Portugal
- combine the targets depression and suicidal behaviour
- combine intervention measures
  - synergistic
  - catalytic effects
- start with a model project
- support other interested regions
- establish a national network of regional alliances (learning network, exchange experiences and intervention materials)
- balance between bottom-up and top-down elements

Thank you!